Interview of Gil Shwed

Interviewed by:
Marguerite Gong Hancock

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Marguerite Gong Hancock: Well thank you so much Gil for agreeing to be interviewed today for the Computer History Museum. It's really an honor to have you interviewed today. Today is July 28, 2015. We'll start with your background. Your involvement in information technologies really started at a remarkably young age. You were programming, I think, as a teenager and started classes in high school at Hebrew University. What are the roots of your interest and capabilities in IT?

Gil Shwed: That's a good question. I started getting seriously into computers when I was ten. I learned programming. I think my father dealt with it. My father was a system analyst. A very different type of computing--big IBM mainframes and so on. Probably that's something that attracted me. As a young kid I went to all these different activities and tried different activities. And actually computers were probably the first activity that I chose myself. After school when I was in fourth grade, or fifth grade, I took the bus for an hour. I waited two hours until they opened, and then I went for the computing class which was in a religious community center in a completely different part of the city in Jerusalem. That's what got me started. I really, really got into that.

By the age of 13 or 14 I already felt that I had learned everything that I could. That I knew how to program. By the age of 12 I already had my first summer job as a programmer and in a company that actually did something very innovative back then, which was computer automated translation. What we know today as Google Translate. But that's was 30 some years ago. That was a real revolutionary thing.

By the age of 14 I said I already know everything. I need to challenge myself again. I can't continue. Then I decided to try and apply to learn at the university. I applied to the Hebrew University in Jerusalem. For six months I knocked on their door, literally. I said, I want to learn here. They said, OK, but you're 14. You don't qualify. I said, sure, but I heard about some young people that already did it. I really want to. They said, OK, we'll have the committee decide in x number of months. Every day I went there, I knocked on the door; I said is there something new? When the semester started, they said we haven't decided yet, but just come to the classes. I continued there.

Hancock: That's an amazing story of your curiosity and persistence. Paired with your innate ability. If we fast forward and look at your first product. What were some of the key elements that led to that fundamental breakthrough in your idea for what's now the industry standard for firewalls?

Shwed: I started Check Point when I was 24, two years after I served in the Israeli army. All of the people in Israel at the age of 18 go to serve in the army. In the army I did serve in computers, bringing my actual experience from the University and everything I worked with before. To try and implement new technologies, especially every thing about UNIX systems, IP networks and so on which were very, very new back then. Bringing it to the specific unit that I was in the army, and I wanted to change that.

By that time, three things had happened. First, for several years I knew that I wanted to start my own company. It wasn't so much about the business, but more about developing my own product. And being successful, developing a product that other people in the world use. And it's the best in what it does. So that was one thing, that for almost 10 years, I looked for the right ideas to develop. I got this idea for a network security product when I was in the army. One of the projects that I got in the army was to connect two networks. Again the whole world of networking was rather new. We've got IP networks, that again were new. And my task was to connect two IP networks actually in the same building across the wall. But to make sure that information didn't leak, or didn't move. It was a very, very classified network. The information between them was contained.

I thought about what I could do. I looked for a commercial system. I couldn't find any good commercial solution. Then I came up with a simple idea. I could write a language that analyzes communication protocols and very quickly can determine on every packet that passes through the network wherever it should get through or not. I implemented that in the army. By the time I left the army I had several ideas for a start for developing a product. This was one of them. That was in 1991. In 1991 I actually

investigated that idea and my conclusion was that there was no exciting market around that. Going to big organizations, defense organizations with more sensitive information security. It's doable. I could convince them that their network needs to be compartmentalized and more secured. But that's not very exciting. So I did other things for two years.

I even worked in some other Israel technology companies. I actually even started a startup, or a development center, for an American New York-based software company in Israel. And passed two years like that. And then at the beginning of '93 I saw the internet coming. I saw suddenly that the internet is opening up. Up to 1993 the internet was pretty much closed. It was only for academic research. By the end of '92, the beginning of '93, the internet opened up. Organizations were allowed to connect. Commercial internet use was suddenly starting up. Then I saw the huge potential of it. I said, especially as a young person in Israel selling the potential to communicate with the rest of the world, that was amazing.

And remember that was before the web. Today we know the internet around the web. That was when the web was just being invented. Nobody had a browser or a web site. But still, the ability to communicate with my peers in other countries. To send email, to transfer files, within seconds. The ability to be online all the time. Looked like it would have a huge potential. It will change the world. I said that internet thing needs security. And then, by the way, there was the need. Every organization that connected to the internet immediately said the same thing. We want to connect to the internet. There are 15,000 universities out there. I want to make sure that all of these students don't get into my network. And then I said OK, I got the idea. Here is a very exciting market. It has a lot of potential to connect the world. And that's where I decided to start Check Point.

Hancock: That's a perfect segue. You've had this essential breakthrough idea on the technology side. You've identified the market. Can you walk us through the very early days of matching the market with your technology? Do you remember your first business plan? Your pitch to investors? And who you were with as your co-founders? How did all those pieces come together?

Shwed: So yes, I did decide that I didn't want to work on my own. Being alone is not fun. So I approached two of my colleagues and friends. Marius and Shlomo. They already knew about the idea because we were discussing ideas before. I told them, I have this great idea. Let's start a business around it. Marius immediately joined and said I'm on board. Shlomo initially said I'll join, and then he figured out he had just joined a new company. Just had a new baby born. And he said, I'm not sure I can afford starting something from scratch, and being left without the ability to support my family and so on. So we decided to wait. A few weeks later, he claims actually that I told him that this is a life-changing idea. That this is a once in a lifetime opportunity. I don't remember ever saying that, but he claimed once in an interview once that I told him that. Then he decided to jump on board. And then we started looking at how to develop it.

The first thing we did was to take all of our savings. And we found out that there was the first internet security conference in San Diego, California. So Marius and I took our savings and booked an airline ticket. Flew to this conference to see what's going on. Because one of the big things was let's not develop something that other people have. And again remember, there wasn't information to surf the internet and find what's available. That wasn't yet, back then, something that you could research. So we joined the conference. It was really interesting. And it actually reassured us that we were on the right direction. Because first there were 100 or more people showing up to the conference which means that there was an interest. The ideas presented, and the people presenting, were more on the academic side. And less on the applied side with ideas that can actually work in the real world. Which I felt was good. Because if we went there and found 20 other groups trying to develop the same thing, it would make things different. So we came back with that reinforcement for a potential for our idea.

We didn't know what to do yet. There wasn't a venture capital industry in Israel. There were technology companies. But not like today where there are thousands of startups and the whole ecosystem of how to start a company with people that will guide you with venture capital and so on. We figured out whether we should develop it after hours and keep our day jobs. Then when we have a product start selling it. We

figured out the market is actually moving fast. We need to quit everything we're doing and dedicate 200% of our time to developing a new product. We also figured out that in order to do that it's best to raise some money. Just even then the $20,000 we needed to buy Sun Unix computers wasn't money that was available to us. It wasn't developing with personal computers, which actually I also didn't have.

So we did realize that we wanted to raise some money and start working. We actually contacted two software companies that we knew in Israel. And a few other organizations. The other organization wasn't a good fit. The two software companies that we knew back then looked like very successful role model companies. Each one had a few dozen people, and sold for $3 million. That looked like a good model. And at the end of the process we had the very tough negotiation. At the end one, company called BRM, won and got about half of Check Point for approximately $250,000. A few years later they turned to being venture capital full time. They left the software business.

Then we started developing the product. We got loaner computers. We developed a business plan (which was actually quite an interesting business plan.) We really analyzed the market. We planned when we'd have the product, how many resources we would need. We spent the whole summer, that was the summer of 1993, developing the software. That wasn't even in the office. It was Silicon Valley. The garage operation terminology. Our garage was Shlomo's grandmother's apartment. It was a small apartment. We started in a tiny room next to the kitchen around April. By June it became warmer. Also we got the new computers that we bought. They were generating a lot of heat so we moved to the living room. We spent the entire summer. By the end of the summer, we actually had a nice product, or a prototype of a product.

Hancock: So it sounds like a prototypical start up where you're bootstrapping, looking for funding, looking for mentors, looking for role models. And yet you said you had developed a very good business model. As you look back at it, what was validated in those first early years? As you looked ahead, as you thought how it might, and what turned out to be different?

Shwed: So what we did a few things that were-- For example, usually you write a business plan. You do market research. We decided, for example, not to do a lot of market research. We started with that conference that we went to. But then we said, if you're going to go and reveal our idea to new people, the market is not established yet. Most people won't know what the internet is. So they might give us some feedback, but it won't be very relevant because six months later when we come with the product, they will be in a different position. The market will be in a different position. We decided first to develop a product, then to do our market research. Once we had the product we started taking it to customers assuming that would narrow the gap. If we come up with a ready product, do you like it? If not, what should we change? And then we'd have a gap of a few weeks, or a few months, to change it. Not a year gap between the time we ask the question and the time the product is ready.

Also let's realize that we started in Israel. One of the first ideas of our business plan was that we wanted to be successful in the global internet realm. That's not in Israel. We actually tried to turn that limitation of being very far away from the target market into a few advantages. The target market was clear to us: our target market was the US market. That's where you read about new products, that's where people hear about that. So the entire world imitates the US when it comes to technology. So that's the market that we wanted to win. So all of our market research, beta sites, everything we tried to do in the US where we get the relevant feedback. By the way, many companies make the mistake and go to do their first step in the local markets. Sometimes it works. Usually you would get some feedback that's relevant, something that's not relevant. And a lot of time you just get tied to the first few customers. And again, in our case we wanted the first few customers to be the models for the next ones. So those were the ideas.

We had a lot of limitations. We didn't know how to run a sales force. We didn't have funding to hire a sales force. And we were far away from the market. So we made few strategic decisions that were pretty important. One was to try and establish a distribution network. Finding local resellers that would sell the software. Second was to make the product extra easy to use. Again when you talk about enterprise software, and security software, it's not the same situation as today. It was definitely not the situation 20

some years ago. So we developed a graphical user interface with icons. Which is very object oriented. So instead of defining the security policy in terms of IP addresses, protocol numbers, and so on. Everything was colorful, with names, were objects.

In terms of installation, I spent a tremendous amount of energy making the product extremely easy to install. And that means it came on the single diskette. Something that doesn't exist anymore. I had to spend time on writing the code, the software itself, so it would compress itself so it would fit on to the diskette. And compress the graphics because the graphics took, the logo and so on, it took some-- Until I was able to put it on a single diskette. Make it such that you can put the diskette into the computer again, Sun Unix servers, not a PC, and install it in 10 minutes. My idea was that my customer is 10,000 miles away. They should be able to get the books, to open the diskette, to install it themselves, to figure out how it works. And they say I really like the product, how do I buy it, where do I send the check? That was the whole idea.

Now combining these two ideas of establishing a distribution network with local partners and having a product that's really easy to use. With very good management capabilities. Created a huge difference that actually these days, as I said 20 some years later, are still strategic advantages of Check Point. Because when the market started to heat up, the demand went up. Our competitors that were doing security as a project. A team of experts would come to the customer's side, install some hardware, configure software, and spend two weeks at the customer's side. They were limited. Of course we believed that we had the better technology and the better approach. But beyond the basic technology, they were limited in the amount of teams they could send per a week. We could send 100 diskettes and reach a much larger number of customers. And even more so with our distributors.

Again, getting access to different markets. To the Bay Area, to New York, to Chicago, and to other countries, and covering the bases. When you have to go site by site on your own, it's very difficult. When you establish a relationship with a local reseller and send them the diskette. For them it's not a long training process to learn the new product. That becomes a great business model. For the early years that business model worked really, really well. Still does by the way. And that actually established the foundation of what we did in Check Point. Actually we turned our limitation of being a small, far away from the market, Israel company into great advantages. That became a strategic advantage. Not just things that were good for one or two years.

Hancock: Thank you. That's such a clear story about those advantages which have become your strengths. For people who are listening to you now, could you give a little bit more detail when you were talking about compressing on to the diskette. What were the technical specifications? What was the memory capacity of that diskette? What were the processing speeds of the Unix servers that you were using? Describe what the world was like for the technology. What you were offering for your customers and their uses?

Shwed: One of the things I once said was security should be transparent. Should be easy to the user, should not slow them down. So I said we need to work at wire speed. Most companies connected with the T1 link to the internet, which was one and one half megabit. We ran on a Sun computer. The Sun computer had an internet connection of 10 megabits per second. So I said, the software should run at the full capacity of the Sun computers without slowing anything down. And in terms of their size, the diskette was about 1.4 megabytes. So again, the whole software, including everything, has to fit into 1.4 megabytes. Installs itself into the operating system. I've developed a lot of hacks because the firewall software itself actually needs to plug into the operating system, take all the traffic, filter it and return it back to the operating system. There wasn't any, on the version of software we ran back then, Sun OS4, there wasn't any interface to do it. So I had to develop my own hacks to software into the operating system kernel, change the operating system code in a very illegal way, and take the traffic and return it filtered.

So it was 1.4 megabytes, the software compressed. It was running at 10 megabits per second. It actually worked very well.

Hancock: Well, congratulations for that. As you think about the evolution of the business model, Check Point has epitomized a company that's been in a fast growing market in a rapidly changing environment. What key decisions over the past 20 years, or strategic shifts, have you been able to look at that are inflection points as you have evolved the business model and strategy?

Shwed: The first decision was about how to develop the product. I think we made the right decision to develop a product that looks like (even though it's an enterprise product) to make it look like a consumer product. That was extremely efficient because the market turned to be much bigger than we thought. And much more developed. So that's really impacted the business model that we could duplicate it at a very large scale. Which is still a limitation of many start ups. They build a business model that's tied to a few large customers. And they are successful with these customers. But they don't have a scalable model which they can go and install hundreds of accounts. And then thousands of accounts. That was one strategic decision. Which, by the way, wasn't easy. Because it's much easier to say, let's take the technology and find a few large customers. Install it for them. That's the typical one. We invested many, many months of time that we really didn't feel we had in making it a graphical user interface. In making it easy to use. And all of these kinds of things.

The second decision was to on one hand go on to a distribution network. On the other hand trying to establish strategic partnerships. Because the local distribution and the resellers, they weren't that easy to get to because there weren't internet resellers. When went to speak to people who sold computer networks, I said this is the typical channel that I want to go. They all told me that there is no real market on the internet. Some that were extra smart told me to come again in 2 years. Then it would be a good time to speak to us. By the way, one of them, 10 years later, became our largest distributor in the world. But again it didn't help us to wait two or three years.

What we decided was on one hand to try and develop that reseller network. On the other, try to establish a strategic relationship with companies that could take the product to market. One of those companies was Sun Microsystems. And they were by then selling almost 100% of internet servers. They were a very successful company in the Unix space. But on the internet they became the owner of the whole internet. Microsoft didn't acknowledge the existence of the internet in '93, '94. The other companies that were in the server business weren't really into open networks. And I tried really hard knocking on Sun's doors. A few other companies too. Eventually Sun decided that they wanted to OEM our product and offer it through their distribution network, which was ideal. We decided that we wanted to establish a strategic relationship. It would give us a big jump up. At the same time we decided that we were unwilling to give them exclusivity, because that would jeopardize our entire future. They're a large company, they can decide to push it, they can decide to drop it at a certain time.

At the end there was a very long process of negotiating. We had a lot of interesting stories about that. At the end of the process we established a relationship with Sun. We worked very closely with them to make them successful. And at the same time we developed our own Independent reseller channels. So we were able to grow both sides of the business. Even though Sun, at a certain point, became more than 60% of our sales. We always continued to push our own independent channels. And at a certain point, when Sun stopped selling our product, and went out of reselling it, instead of being a push back to the business, it became a very big accelerator to the business. Because we could transfer all of the Sun channels to ourselves and get even better business terms, and better control, and better support for these channels.

Hancock: These partnerships are really important for young companies as they are evolving. You mentioned that there were some funny stories and difficulties along the way. Do you mind giving some color about how it was to establish that strategic partnership in the early days for you?

Shwed: So initially I spent several months here in the Silicon Valley meeting with the product management and business management of Sun, establishing a very good relationship with them. We spent many weekends here in Half Moon Bay, in San Francisco, and so on. At a certain point, I said we

want to start business negotiations. We really want to do that. Then we figured out how to run a negotiation.

We contacted our lawyer, who was not just a lawyer. He's a mentor and business adviser. His name is Haninah Brandeis. We said, OK, how should we run this negotiation. He said: well, one option is to go to Mountain View and sit with them and run the negotiation. It won't run well because they will have all the time in the world and you will want to finish. Another option, they wanted to come to Israel to see how we worked. He said, don't even think about that. They're a big company. They'll see that you have a two-room office. There is no way you're going to get good business. Even if all they know it's the three of you and they know you're not a large business. It won't run well.

So at the end, we decided we'll do it in the middle. We figured out that we would meet in New York. And then we did a very interesting trick in New York. Sun came into the room with three people--the product manager, the business development person, and their lawyer. We had 10 people from Check Point in that room. Sun were in jeans and t-shirts like a good Silicon Valley company. We brought ten people with ties and suits and everything. In the company we had three people. But we brought the three of us, two or three people from our investors, two lawyers from Israel, one or two lawyers from New York, one or two business advisors that we had there. So they went to the room and they figured out that they were meeting a large company that knows what it's doing. We spent the entire week negotiating. I was shocked because we had all of these people that were experienced. We went to the room and they said, OK Gil, run the meeting. I was 25, 26 years old at that time.

So we started the discussion. We went over and over, and debated what to do. By the end of the week, we actually got to some business terms. Even though we had like seven lawyers in the room, at the end of the week we had nothing written. So I spent the weekend in the hotel room with the business development guy from Sun and we both drafted the term sheet that we had. After the weekend we sent the term sheets to all the lawyers for comments. They started the business negotiation on formalities. We signed and initialed the term sheets. I think two or three months later we got an advanced check from Sun. They started selling. To get the full contract it took another two or three months. Then I was invited to tour around the world to sign up additional resellers and additional partners. We never stopped that.

I was on my way back from Japan. It was my longest day in life. I started the day in Japan. In Japan you spend the entire day, take an evening flight, and you were supposed to get to San Francisco in the same morning. I decided that that wasn't enough. So I stopped in Hawaii on the way and did a tour of Hawaii on the same day. Then I took the night flight from Hawaii to San Francisco. I don't remember if it was still Sunday or Monday by that time. And I had a meeting with the head of Sun software. I was supposed to sign the agreement. And I didn't wake up because I had that 48 hours. But we signed it the next day and we went along the way. Sun became a very, very important partner for us.

Hancock: That's quite a story, quite a story. How about other shifts in your business models that have evolved more recently in the last 10 years, or even five years as your strategy is growing--More global market, different kinds of products, changes in technology.

Shwed: So we've done a lot of changes, and a lot of attempts to expand I think. So far most of our business is still in the core market of network security. The gateway that was the firewall 20 years ago became a much more sophisticated thing. It runs what we call software blades. It's like 10 different types of security capabilities all integrated into the same platform that connects to the world. But I'll give you one example of a business decision that we had to make. We heard all the time that we're a software company. People would take our software, run it initially on Sun servers, then on Windows machines, then on additional types of machines--machines that became the gateway to the internet. One of our strongest platforms was developed by Nokia.

Nokia decided to get into the internet business and developed an internet connectivity business. They tried to develop multiple things. But in the end what they ended up with was a business that was mainly

building dedicated hardware for security. 95% of that business was running Check Point software. The market evolved, the market shifted away from software that ran on standard servers to more dedicated security appliances when people buy the whole box, including software and hardware. For years I resisted being in the hardware business. I said, the creativity, the innovation, the value of what we do in software, which is what we do. And most of our competitors, If I name the largest one, Cisco, were all about integrated systems. In 2006 we really struggled with that decision. Because we were the only one that was only software. All of the others were selling integrated systems.

We decided to start developing our first integrated appliances, trying to base them on relatively open hardware and not having dedicated hardware developers. We started that. Initially we started that in the garage of one of our sales engineers in New York. He got open servers from IBM and other vendors. He got customers that really wanted integrated solutions. He installed the software, the hardware, combined it, put on a Check Point sticker. And those were the initial sales, once we saw that there was a huge demand for that. Customers really preferred to get the integrated solution and to pay a nice premium for that. I guess because it saves them for two reasons. One, it saves them the total cost of ownership of maintaining the operating system separately from the server, separately from the security software. And the second was that they got one company to call for every problem. When there's a problem it's calling the vendor--one vendor. Not figuring out if it's an operating system problem, a hardware problem, or a software problem in the security. So we started developing an operation like that. It was a big change to our business model.

The whole concept of being a software company when you just click Yes and there is a new software license. And you are unlimited in your production. Then you sell hardware where you have to actually be stuck with inventory. Predict what customers will want. Be dependent on shipping and installation and so on. So we went into that business in 2006, 2007. It actually became quite successful. By 2008 we actually even purchased the Nokia subsidiary that was doing dedicated hardware. And in 2008, in 2009, when the entire IT world was struggling with an economic downturn and all the companies were becoming small, we actually grew quite nicely with the integration of these businesses. That was a very tough decision for me to change from a pure software to an integrated solution. But so far I think we're six, seven years into that and it's working quite well.

Hancock: Thank you for describing that integration from hardware and software. You think about great companies. Great companies have not only great technology, and customer relationships, but a kind of culture. How would you describe Check Point's culture? And can you share a specific example, or story, about how that culture has been defined and how it actually works in practice?

Shwed: The culture changes. But we definitely have some characteristics that are defining us as a company. I think one of them is that we're very analytical and try to analyze everything. I say: think first, plan first, and then implement. Many people would like to say, OK, here's a good idea, let's run with it, let's implement it. Then if it works, great; if it doesn't work, we spend some time. I like that idea less.

And I have all the reasons why I don't like it. Mainly because if something is not successful, then you shouldn't have spent the time. If it is successful, you want it to be successful in the right way. You want it to be scalable. You don't want to say OK, I've got something which works great. But I started it with the wrong set of things and I can't scale it now. And that's where companies start to grow businesses, which are good businesses, but not in the right way. And always the rule that we know in life in general-- it's almost always easier to build something right than to fix it. Fixing things costs much more than buying or building the right thing. Not that we don't have to fix things, but we're trying to reduce the amount of fixing that we need to do.

So, for an example that characterizes us, that's not easy for people. Because people bring an idea and instead of telling them that's a great idea, go do it. We're telling them OK, that's interesting, let's do revision two. Let's think about what could go wrong. Let's improve it. And that's a very challenging process for the people.

The other thing that I think characterizes Check Point is that we strive for excellence. And striving for excellence sounds great. Because we have great products, and the best people, and all the good things. But in the day to day life it's quite the opposite. Striving for excellence is always knowing that you can do better, and that you should try to do better. And that's one of the things that characterizes us. Hopefully it helps us achieve better results. But in the day to day it's quite difficult. And I have a lot of stories like that. We see it every day. But I have a story that was from the year 2000.

The year 2000 was one of the greatest years for all technology companies. The market was booming. ,Everything was growing. We were doubling in size. And we did our first partner conference for European partners in Israel. We were so happy that we could bring the Europeans to Israel. We took them to a city in the south of Israel called Eilat, which is always sunny, always hot. With a beach and so on.

It was an amazing event. Everybody was extremely happy. For like three days we had the night, we had the desert. Everybody was thrilled. Business was going on; we had great product. Everyone was very, very happy. Then we went back. We got amazing feedback from everyone. We went back to the office and there was a lady running our entire international operations at Check Point. And she got an email from my partner Marius. It said here are the 15 things which we need to improve. This presentation wasn't to the point. Here people stood in line for 10 minutes, they shouldn't have done. With 15 points like that. About all of the things that went wrong. She was shocked. Because we were all coming back from a great place. And here's this email about the 15 things went wrong.

So she sent an email -- or, I'm not sure she was even brave enough. Her boss, Jerry, was our president, running the entire world-wide sales sent Marius an email back. He said, “Marius I thought that the event was great and very successful. Looking at your email it seems like we weren't in the same event.” So Marius sent him a one-line email back and said, “No this was a great event--the best ever. We just need to improve on all of these things.” So I think that characterizes Check Point in many ways. We're always trying to improve, and that always challenges everyone.

Hancock: That's great, this constant improvement--even doing better than your best in the past. In a digital era when ideas and capital often flow quickly beyond borders, I think culture and place still make a difference. From your perspective, what difference, if any, has it made that Check Point is headquartered and its DNA is in Israel? And how do you think that Check Point's culture either mirrors, or stands apart, from the broader Israeli tech community?

Shwed: First it was a big challenge. I think I said earlier that one of my first decisions was that we need to focus on the US market. We must be a global company. That actually influenced a lot of decisions that we made. For example, in terms of managing the company, usually it's easy to work with people. If we're Israelis, then it's Israelis. And if we need to sell in the US, send some Israeli to head the operation in the US and hire people. I didn't believe in that. I believed that if we work in different markets there is a very, very heavy weight of the culture. If we operate in the US, it needs to be with American people. If we operate in France, then it needs to be with French people. And that's the toughest implementation. Because I had to come and look for American people here in the US who are the best in what they can do for us. And not people who have any relationship to Israel. Not people that are Jewish, not people that care about Israel.

Like my first hire in the US was Deb Triant who ran our US operation sales and marketing world-wide actually. And she had nothing to do with Israel. It was very hard, because when you connect with people part of it is also cultural. There was nothing connecting us. I was probably 10 or 15 years younger than her. I grew up in Israel. She grew up here. There were completely different mentalities from a cultural standpoint. And we still had to build a business together. We became very good friends, by the way.

Because one nice thing I've seen over time is that the cultures around the world are more alike. We can all connect as people and not keep the differences. But one of my main challenges in Check Point was keeping that global culture. Understanding that it's not just Israeli mentalities, or American mentalities. We had to define our own culture. It's still very difficult up to today.

For most of my career, for almost 20 years of my career, I spent half of my time traveling. I spent at least a week a month in Silicon Valley. Most of it was to bridge the gaps between the different parts of the company. There are a lot of good things in the Israeli mentality, but I definitely didn't want to take the Israeli mentality and make it our mentality. The Israeli mentality, by the way, has changed in these past 20 years. The American mentality is much more organized, much more process oriented. The whole communication is different between people. The Israeli mentality is sometimes improvisation, and more friendly, let's do that because he's my friend. I said excellent, I can't work with my friends. I only need to work with people who are the best in what they do. And even though I started Check Point with two friends, Marius and Shlomo, I chose them very carefully as people who I think are top caliber. There are many, many other friends that are smart people, good friends, in my profession, and I chose not to work with.

So every decision between that we made in Check Point had to be extremely professional. Not based on improvisation, not based on friendship. I can tell you that one of my first hires in Check Point was a woman that back then I only wanted to hire for a summer internship. She was learning in the US, I knew her from my childhood, we were friends when I was 12. I didn't talk to her even for 10 years. But I decided that I can't hire her because I know her personally. So I only will let my other colleagues interview her and make the decision. I wanted to make the separation between the personal friendship and the professional decisions that we made in Check Point. I think that shows in the professionalism that people show.

Interestingly enough, by the way, that woman started working as a summer intern with us. Went back to school, and then went back the Check Point. And today it's been more than 20 years that she has worked at Check Point. Became a vice president, she changed many, many different roles. And that was the right decision. The interesting thing was that even though I knew her many years before, and I thought highly about her, I wasn't even involved in the decision to hire her. I wanted it to be extremely professional. And that's the nice thing. That 20 years later you can show that someone grew from the very entry level, to be a part of the very senior management. All by the merits of what they've done, and by how good they are. Not by any favoritism, or any other reason like that.

Hancock: Absolutely. Before we leave this topic of leadership, I'd like to ask you about how you spend your time. You mentioned that your time—an executive's time--is one of the most precious assets for you as well as for the company. What are the things that you feel are yours to be driving right now and spending your time with?

Shwed: It changes over the years. In the early years I did everything. I've built, I developed the product. We got to the product when we programmed it. There weren't any programmers. I did the first few sales, the first few partnerships. I hired the first few people. I started the marketing organization. Hired the first PR firm. All of these things I've experienced myself. I was even the CFO for several occasions in the history of the company.

My rule back then was a very simple. First, daily operations that you need to deal with. Then I had a three month goal and let's say a one year goal. And each three months I had a project. If it's to hire ~~a~~ management for the US operation, that's a three month project. If it's to do a partnership with Sun Microsystems, that was a three month project. So every three months I had--we had--a vision. But we need to establish ourself in the US, that's the year long vision, but it's divided into three month projects. And every three months I needed to complete one. That was how I divided my time. And of course in the meantime I had to program. Work with customers, and do a lot of other things like that.

Then I went to a different stage of developing a real management team. In the early stages I worked very closely, and I was a very, very involved with a lot of details. That's most of my career in Check Point. The bigger we became, I couldn't be involved in every single detail. But I still was able to create an impression, right or wrong, that I'm involved. Because if I take a product, or I take an organization, and dig deep into it, I'll do it once every five years. But in this time I'll ask a lot of questions. I'll spend one or two days. I'll ask people. I won't be shy of asking any question. Dig into that and show my experience, or say this is the way it's done. I don't remember it being like that, can you convince me. Sometimes they'll convince me' sometimes they won't. But the impression that people get is that I'm involved. Even if two years later I don't touch, I don't check what they're doing, I'll still be involved.

In the last three or four years I think I've changed a little bit of things. I've got a management team here. I don't know if it's better than the previous management that we've had. All of them were good. But there's more delegation. I've got people that I really trust on the management. They make much more decisions on their own. Usually it's the same decision I would make, but not always. Sometimes we would make different decisions.

My role today is less operational. I'm much less involved with every decision. Do that and do that. I'm trying to be more involved, on one hand, in the culture of the company and participating in that, and, on the other hand, figuring out what strategic initiatives they need to be involved in.

I would say probably 10% or 20% of my time is ongoing weekly management meetings. Weekly hiring meetings, that's one of the areas that I'm still involved with. Every week we have the committee. We look at all the candidates to the company. We go one by one. We decide to approve, and sometimes not to approve the hires. This still brings us together and makes us sure that we're keeping-- that's the most important asset that we have. It's the people. So at least it shows that we're involved and that we care about who's being hired. So that takes, I would say, 10-20% of the time.

The rest of it really varies. If it's the season that we have our customer conferences, then I'll travel and meet with customers and do presentations. If we're in the middle of thinking about next year's plan, I'll spend a week or two thinking and strategizing about what should be the big initiative. So that's the more dynamic time the way I spend it now.

Hancock: Thank you. I'd like to turn now to a little deeper dive in innovation. It's really at the heart of Check Point and why the assets of people are so important. As you look back at the first product, and how the products have evolved with the different technology platforms and end users, what innovations are you most proud of, and why? Technological innovations.

Shwed: There are a lot of different things that I am proud of. We turned the first platform that was a pure firewall access control into something much more robust. Whether it's how to run virtual private networks that create encrypted communication between users, and between different sites. It's newer technologies to identify threats.

For example, if I focus on the last few years, we came up with a technology. It's called sandboxing technology--one of the most difficult things to date. It's really hard. Conducting network attacks and organization became harder. The firewall became strong and that's not easy to penetrate. What the hackers are trying to do is send you a file that may look like a normal Word document. Then you receive the file, open the file, and the file will exploit a vulnerability in the operating system, or in the office software, or in any software that you run. So you basically go through normal communication.

Traditionally anti-virus software would've caught these files because there were signatures. It says this file was identified before. The new type of model where they know how to hide themselves better. Sometimes they are targeted so the file is unknown when it gets to the organization. In many cases they are not given sending millions of these files, but sending fewer of these files so it's harder to catch them. One of the technologies that we have is how to take these documents that look completely innocent, run them in a

sandbox environment, and try to analyze their behavior. Are they behaving like a document, or like something that tries to exploit other things in the computer? So that's, for example, one technology that we did very well. I'm talking about this technology because this technology exists today in the marketplace and other vendors are also doing that. We can argue whether we're doing a better job and our developers have developed unique characteristics, which I think some we do, and there are companies that are even bigger than us in that specific technology.

But one of the things we did this year, for example, was say, “Let's completely change that paradigm shift-- taking that file, running it in a sandbox environment. It takes a lot of resources, it takes a lot of time, and the file is delayed for many, many minutes. You need to run it for an extended period of time to see what changes in that time. It may not start doing the bad stuff in the first second. It may start to do it five minutes later. Let's think about new ways to do that.” One of the ways-- and that's what I usually like to see about innovation--we came up with is let's completely restructure the file. The malware that's inside the file is really dependent on specific structures and things that are very, very delicate. If we take the file, that looks like an innocent file. Print it and then send it. Then the whole malware goes away. That's what we develop, we call it Threat Extraction.

That method is much simpler. It's not completely simple, but it's relatively simple. You can reconstruct the file. Once you reconstruct the file usually the bad impacts that file could have are going away. And that's what we did. It's called Threat Extraction. We've found a 100% success rate. We took all the known and unknown and new malware that we could think about, we ran it through that Threat Extraction engine that sends the end user a file, and the malware is not there anymore. It's not effective anymore. And that runs fast. It's reliable. And at the end of the day as a user, that's what you want. You want to see the file. You may get an explanation that says this file was actually reconstructed. If you for some reason you need the original, click here and get the original. But usually you don't need it. That's one kind of innovation-- just think differently. Much simpler. Let's not go on the route, which we are still doing for analysis and things like that, to the threat elimination. Going the route like that.

I'll give you another innovation that I helped shape, I didn't write any of that. All of the credit is to our developers. In the world today, there is a big problem. A few years ago, it was even a bigger problem of information leakage. People sending by mistake--or not by mistake--data and documents outside of the organization. This year we saw huge incidents around that. Saw a lot of them. How do you combat that? Companies develop technologies that are very sophisticated. Labeling all of the company documents. Analyzing the text of the document. They're not really effective because the computer cannot understand what human beings are trying to do.

So let's say you mark a document and you decide that this document looks sensitive. Looks like it has financial information, what do you do? If you stop it, you stop the work. It could be me sending the information to the accountants. It's sensitive information, it’s sent outside of the organization, but it's still right. If somebody else sends it and leaks it to somebody else outside of the organization then it's very bad. So how do you determine? One method is to define very complicated rules: who is allowed to send, who is not allowed to send. Usually this is what these systems do, and a lot of the security systems in general do today. They see bad things, they don't know for sure that it's bad, so they let it pass through. They create an alert for somebody to check it out. Then the security administrator is faced with hundreds of incidents a day that they need to go through and they simply can't.

It also involves privacy issues. Do I want somebody to read my emails and make a decision if it was right or wrong? It's a privacy issue. So I said let's take something much, much simpler. If the system determines that that file is suspicious. And suspicious yes, maybe not. Let's ask the user. So instead of trying to go the hard way of the computer makes the decision, the computer will ask the user. When the computer asks the user, think what happens. If it's a mistake, you say sorry and you drop it. If you're an intentional hacker you know that you shouldn't say I want to do it because you know people are watching you. There's an auto track recorder. Not only that, it educates the user. It tells you that you're not supposed to send files of the company outside. You can say, oh I did it by mistake. Now you have to give

a reason for why you're doing that. And the reason that I'm sending it to my private Gmail account to work at home is not a good reason.

So for example, that technology created a complete shift in our ability to deal with it. And the number of information leakage incidents went down, when we checked it by organization, by 99 or 99.9%. And now what you have in every week is 10 or 20 records that the security administrator needs to go through. And that's very easy to determine. We they see the CEO sending financial information saying this is for accountants, it's very easy to say OK. If you're seeing an employee without the right, and it says this is financial data, an employee that's unrelated. If the reason looks bad, security incidents usually don't happen. When people are trying to do bad things, they are not stupid. You're telling them you're not supposed to go out with it, stop. Then they stop, they don't try and go through. I'm giving that example because this is thinking differently than the traditional way of making things more sophisticated, faster, and so on.

Hancock: Those are wonderful examples of this thinking differently, thinking out of the box, and thinking in a very elegant way. Important innovations occur not only in technologies, but business models as we've talked about earlier. As well as business processes. Are there any other innovations of that particular type that you'd like to talk about for Check Point… especially in the more recent period?

Shwed: In the more recent times we've changed our business model a little bit from selling pure software to selling integrated systems. We try to keep it very software-like. So out of, say, 1,200 developers that we have, there are not many hardware developers. We do all outsourced because we want to keep the value in the software itself. I think in the early days of Check Point we did that. When we developed the channel it was a great, it's not innovation because we were not the first company to use a channel, but we really built the channel from scratch. The first few channels that we had were pioneers in the world of internet. Taking the business model of enterprise software and security and making it a sort of off-the-shelf product, was a big business model innovation. It changed our market landscape. These days everybody's trying to imitate that. Everybody's trying to go off through the same channel.

One idea that's not necessarily from recent years, but also from the late '90s. We figured out that we grew very fast because the internet started to grow very fast. The customer came with more and more requests. And some of these requests, of course we had to do it, some of these requests were-- we can't really do it ourselves. How to connect with sophisticated authentication systems. There are other vendors that are doing authentication. We can't do it on our own. There are a lot of different ideas like this.

We said, let's start partnerships. We said let's not just do ad hoc partnerships. Let's define the program. We called it OPSEC, Open Platform for Security. We'll be the platform and we'll create many different APIs and many different interfaces when partners can communicate with our product and work together. Now the reason I'm saying that is because the big innovation was actually what it did to the business model. We got about 300 OPSEC partners--technology partners that worked with us. Some, it was an ad hoc thing, some were things that actually became very big. There were a few companies where their entire business model was based on cooperating with us.

But the interesting thing was that when we started that we were a company with about $30 million in sales. Not a big company, not a small one by today's standards, but definitely not a big one. What happened was overnight there were hundreds of companies that were working with us. When you're a customer and you ask somebody about your solution, you say who do you work with and they say Check Point. And suddenly after you go to five, six, seven companies, and you ask them who do you work with they say Check Point. They say maybe I need to check that Check Point because everybody's working with them. At that time it made a huge difference in the marketplace. And that was a great innovation, not in the technology, but in the business model. Everybody talked about us. Much bigger than our room in the world. And some of these companies that we worked with were big companies. Much bigger than us.

Hancock: Well, thank you for sharing that example about an open platform for security. With tremendous pressures now to compete and deliver value, what lessons would you say that Check Point might have for other companies about how to innovate?

Shwed: Innovation is difficult. There's no one way of innovating. You always need to listen to multiple constituents. I'll give you one thing that I'm trying to encourage people to do is to get the developers and the technology people as close as you can to the customers.

Hancock: Do you mean physically, or--

Shwed: To communicate. We are in Israel so the developers are far away. So I said we need to bridge the physical gap. We then acquired a company in San Francisco. We said for them life is great. They can talk to the customer every day. And they had a huge customer across the street. Their largest customer. And suddenly there were big, big issues and problems with the customer. I asked the developer, “Did you speak to the customer?” They said, “Of course, our technical support people spoke.” I said, “No, personally. Did you go there, did you try to fix the problem, try to understand what they need?” They said, “No, never.” There are like four different layers of interfaces in how we communicate. Then I realized that the plan that I implemented four years before that, it's not the physical distance. It's how we communicate.

So, for example, we have our field program. Every week, we'll send one developer who will go a week and meet with customers. That usually doesn't happen in other companies. The developer never sees the customer. Now the developer, when they meet the customers, they understand firsthand what the customer really needs.

Communication in general. I would say that 30% of the information is getting lost with each hop of the communication. So if three people handle the customer request until it gets delivered to the developer. The developer understands the direction, but they understand 20%, 30%, of what they really need.

If they meet with the customer first hand they can say, oh I get it. And they can do things much faster. They're also more proud, more proud that they see people actually need what they're doing. It's not the way to create how the entire organization works. But it empowers people to think about the real world problem. Not just what their product management and head of R&D tells them to do. But to think like the customer. This is an idea that I encourage people to get. Again, doing it in a structured way. Not in a way that the programmer now becomes a contract programmer for every customer. But in a way that encourages communication.

I think less resources always drives more innovation. One of the big obstacles, and even for us today when we're a larger company, when you have a lot of resources you always go to solve every problem by the book. OK, I have this problem, it will take me a year. I'll need 30 people. And that doesn't create innovation. That creates a lot of work. Sometimes it creates good results, sometimes it creates mediocre results. Not always great results. When you say to someone, it's you, and the customer needs it tomorrow. Then the real breakthroughs happen. So less resources helps. I see it in Check Point when our larger organizations, when I come with an idea, it's always I need 10 people, it will take a year. And I always say why, I don't understand. Then I always end up with 10 people for a year. And I guess there are good reasons. We have very smart people.

Whenever we have a security issue, a severe security issue that was found in the world, suddenly all of these processes that usually take six months of the year suddenly happen overnight. That shows the DNA of the company. When people hear a critical security breach and we need to fix it for the customer, immediately, or not just for one customer but for the world, immediately the developers come for two or three nights in a row. They understand how to do field differently, and all the processes that usually take six months suddenly condense into something that they launch the next day. And that shows the real thinking outside of the box. I don't think it can be done every day, but sometimes it needs to be done. And

that's another thing. So I encourage companies-- by the way the biggest mistake that many start ups have today is they have too many resources.

Hancock: So that's one of the challenges, isn't it, for a big company. To somehow be big but still act nimble and small, and be flexible. How are you addressing that for Check Point now?

Shwed: It's a constant challenge. It's not easy. I think we create a lot of links between customers and users. For example, many years ago I set a rule to my development. If they come and say, OK, here is this user, they want to that, should we develop it for them. It will slow us down from developing things that we're developing for the whole market. I say, first you never know. You're developing something that you think the whole market will need. Here is something that somebody really needs. But in order to solve it, and not to have a daily discussion about 10 different things. Because at the end with 1,000 developers you develop 1,000 different things every day.

And I said something very simple. Up to 10% of your resources will be allocated to everything that the field organization, that the customers ask you. When you go beyond 10% we reallocate resources. We're doing that five, six seven years. We haven't got to the 10% yet, and I think people are happier. Because customers can now easily get answers to what they want. And the developers know that 90% of what they work on is the future generation. Not the day to day. So this is one example of how to be a little nimble about that. It still takes a lot of load when you have to allocate a single developer. But at least it's not the top management at every point of time.

Hancock: That's really helpful. Thank you for adding that detail. I'd like to now talk about what we might call ecosystem. You've mentioned along the way the important role of early investors, some of your customers, and you've alluded to competitors. Can you sketch out for us a little bit of a 360 view of the ecosystem now for Check Point? And how the interaction of the company with these other organizations has made a difference? Maybe even give an example of a key inflection point.

Shwed: So first for a CEO, or for a company, we have to serve our customers. We have to work and serve our employees. We have our shareholders. This is a public company. We have shareholders and board of directors that are not the same. If it's a private company usually, the board of directors represents your investors. If it's a public company, the investors are not represented on your board of directors.

It's definitely one of the challenges for a CEO, to get that whole ecosystem, to create some unity, something that works. My priority is always let's develop the right things for the customers. At the end of the day that's what drives our-- If a customer loves our products, and will buy more of them, everything will turn out well. Developers will be happy that what we're developing is successful. We'll get the money from that and we'll be successful business wise. And if we do that the investors will also be happy at the end.

It doesn't mean that I don't have to meet-- We're a public company since '96. So for 19 years now every quarter we have to meet quarterly demands that are very challenging. But the first thing to remember is what the value we're trying to build, is the value for the customer. And if we build that value, and then do the other things that we do, we'll create a lot of value for shareholders. And at Check Point it works. We're a very profitable company. We're enjoying, most of the time, good support from our shareholders and so on. So that's the first rule that I have.

For investors, my rule is very simple. Try to be a business that's supported by your customers. From our first sale we were profitable. And I refused to hire people before I knew that I had sales that I could pay their salaries. I didn't want to pay people's salaries from the investment money that we raised. We could run out of money, and then I'd have a problem. I'm challenged not with what value of what my product really does, but what's the perception that my investors will have. And will they want to give me money or not. And I said for me that's OK. I can live with it. But I didn't want my employees to be dependent on that.

I wanted to make sure that I could always pay my employees their salaries every month. And I don't have any issue with that. They are dependent purely on our success.

My rule would be try to be self-sufficient as a company as soon as you can. It's not always the first sale, it's not always day one. But companies that keep raising more and more money I always find it frightening. Because at a certain point something is going wrong. And that's the point that you're going to have the most challenges. It's the point that's scary for you, and it's scary to your investors. If you're supported by your customers, that means that you're generating real value. Because in our world, whether we like it or not, the value of what we produce is decided by whether people decide to purchase it and pay for it. And I think that's what I'm trying to implement in Check Point.

If we have a new product, yes we can invest. We can have a lot of people. But if these people are working right, then very quickly we need to see sales. After we develop it. Now I have a board of directors. Some members that have been on our board for 20 years now. Almost 20 years. You mentioned Ray Rothrock from Venrock and Irwin Federman from USVP. They have been with me for 20 years now supporting us. And that's been another interesting experience of how to interact with board members and investors.

Hancock: I'd like actually to follow up on that. Ray and Irwin are both advisory board members on this new center. And I've talked really about your ability to connect what's happening in Israel, what you're doing there with investors here. You mentioned customers. Can you talk a little bit more about your connections with investors here in Silicon Valley?

Shwed: So it's a different perspective back then, when we started, and now. Basically when we started we raised money only from BRM, which were an Israeli company. A year later BRM decided that they wanted not to cash out but to diversify their investment and sell some of their shares from Check Point to additional investors. And then they decided to bring on additional investors which actually were never invested in the company, They bought shares from BRM, the original investors. At that point we were kind of exposed to the world of venture capital of Silicon Valley. And that was a whole new world for us.

Even before that we got Ray, especially, he was trying to hunt for a good company. So he was trying to speak to us before that all happened, because he identified Check Point as an interesting company. We were always polite to these venture capital people. We thought that they may help us with contacts. But we never needed them because we never wanted to raise money. And then we got into this game of BRM trying to sell the shares. The investors wanted to know the company because that's what they're interested in and trying to do our due diligence.

And we on the other hand didn't really care because we didn't try to raise money. Usually it's the other way around, the company is trying to raise money and is very interested in dealing with the investors. We said, don't distract us from running our business. But at the end of the day, we didn't have a choice. So I learned the process of how to work with investors, and it was quite interesting to see.

First I met a lot of smart people. The investors here in Silicon Valley (and these days also in Israel) they are very sophisticated--very, very smart. On the other hand, they also behave in the herd mentality. They all go to the same ideas, to the same thing. I got amazing calls from people that would tell me. Call and say, we want to invest in valuation more than x, it's an interesting company, but it's not worth more than that. Which I didn't care because I wasn't raising money. Then two weeks later another investor comes and raises the offer for the investment. And then they all come and say, OK, we will match it.

We started when the investment bankers were trying to help BRM raise the money. They said we think the company is worth about $12 million, when you want to raise money. We ended that investment around at $50 million. And I had investors that were telling me $25 million is by far the highest amount I will pay.

I always said don't speak to me, I don't care, I'm not raising money here. I don't care what valuation you want to buy. But you must take us at this price, we're the best, we will connect you to the entire world. Even, by the way, I had behaviors from venture capitalists that were horrible--people threatening, if you won't get us, this company will screw you. Amazing promises and amazing threats that an investor made. And investors, by the way, that are very distinguished. Some of the top investment firms there, and still today, in Silicon Valley. And some I thought were on the edge of being illegal with the promises they made.

Finally, we got to the stage when we lined up a number of investors. Whoever made it and they were ready to invest. And they all met the same evaluation criteria. And our investor, the original BRM, told us you have all of these investors. I think Venrock was the lead investor. You can choose which one to get. We want people that you'll get along with. If they're all the same terms, you choose one.

And this was a very interesting lesson for me--how to choose--which I'm still trying to remind myself to do in life. Because the people that were talking were all the first grade Silicon Valley investors. They had good reputations, they all met with us. Of course they were all saying nice things at this stage. And then we called, I won't name any names, then we called one company. A very famous company. If two of these investors were on their board of directors. Initially asked, said they're all first grade investors, we're all great and so on, so you can make a decision. And we ask, between this guy and this guy, who would you prefer? And amazingly said, there is not given a question. This guy always, when something goes wrong, he will always try to blame you. Always try to replace you. And this guy will support you. And so on so.

That was an amazing thing to see. And that's why we chose Venrock and USVP. They got very good ratings in this process. That's a choice process in life that we always need to do. When you get somebody that has experience with two individuals. Or we try two products. They are the one to give you the recommendation. If you ask somebody, are you happy with your car, most people will say yes. If you have somebody with another car, they also say yes. Ask somebody that owns two cars, which one is better? Then they can give you… they also say yes about both cars. Say which one is better, now they'll give you the real advice, which one is better. And we don't usually do it in life. We're trying to make a choice and then get people to say yes, that's a good choice. We are not trying to get people to challenge us.

I'm very happy with where we ended the process. Then we went public. It was a whole different process of working with the financial market--not with venture capitalists, but with Wall Street investors. That's a whole different lesson to be learned.

Hancock: As you think about lessons to be learned, many younger companies look at Check Point as a role model and as a catalyst, really, for the whole Israeli tech ecosystem. What lessons do you see from you, as a pioneer, and also Check Point-- it's legacy in Israel for building that tech ecosystem over these last two decades?

Shwed: First, I'm a little embarrassed when people look at it that way. Generally I'm quite proud, first, in what we achieved. We have a successful company. But I'm also proud in how we achieved it. Because I think that we really worked hard to achieve that. We weren't just dependent on miracles, or huge investments, or things like that. I really feel that the team at Check Point has worked for everything we've earned. I think we've shown both to Israel and to the world that if you're building the right value, you can build the right company. It's not about raising a lot of capital. It's how to take your disadvantage and turn it into the winning advantage. You're small, you can be nimble, you can act fast. You don't have access to the market, then establish a distribution network. That's much more powerful, by the way. You can scale to the entire world.

Hiring people, paying them, figuring out how they work. It is much more costly and takes much longer than signing up two resellers in Japan, two resellers in France. If they work, great. If they don't work, even

that is not the end of the world. And we were very quickly, when we started selling in '94. A year later half of our sales were in the US. That was most of our focus. But half of our sales were international. Because the resellers from all over the world were calling us and saying, can we distribute your software? We did our due diligence to see if we were the right company, that we have the right skills, that they're good people. But that takes two days. Hiring a person and training them takes months.

I think when people have the right idea, and the right time, in the right market, things can succeed. Unfortunately in technology we have a lot of great ideas. But not all great ideas can succeed. And not all great ideas are revolutionary. Because they don't get to the market on time, mainly because the market's need for all ideas is not equal. There are a lot of good ideas that could make small improvements. But small improvements usually are not enough to create a big and successful company.

Hancock: As we end this section on ecosystems. I'd like to use your lesson that you just shared with us about comparing. Take somebody who has active, direct experience, in two places, or two products. To ask you if you would just evaluate, or compare, the strengths or weaknesses and vulnerabilities of Israel and Silicon Valley as ecosystems for developing technology companies.

Shwed: I think both are very good ecosystems. And generally if I look at their differences, of course there is a lot of skill sets here in Silicon Valley, in every area. There is better access to the markets here, it's the US. That's a good thing. Some of the challenges in Silicon Valley: it's much more expensive, loyalty of people is lower. There are loyal people here, and we have people working for Check Point here for many years. But in general the whole mindset of Silicon Valley is we are looking for the next big thing. The new, new thing. And that means that if you're working someplace for a year or two, and it doesn't become the next Google or Facebook, you get some feeling that you're missing out on the opportunity and you want to move on.

In Israel, even if you are part of something like that. Even if you are part of Google and suddenly everybody speaks about Facebook being the next big thing, you think that you may be missing out. In Israel there is much more loyalty for people. Being with the same company for 10 years is a source of pride. It's not a source of thinking that you may be missing out. So people tend to be a little bit more loyal. The whole cost structure of running a company is more reasonable, which I think is also important. I think that too much resources, as I said, is the number one thing that kills companies. These are the main two differences.

They're other things. Like the Americans tend to be much more structured and process oriented. The Israelis tend to be much more improvising and know how to come up with new ways to solve the same problem.

There's no one system that's better. When you want to scale a company, going by the system and having a process is extremely important. I think I'm a very process-oriented person. And I'm trying to implement that. On the other hand, you can't do everything by the process. When you start a new company, of course, the technology has to be innovative. And a breakthrough. And not well known. But sometimes in the business process itself, you have to innovate. And not just in their technology. And that's what Israelis are good at.

I think both places are great. I used to come here, as I said, once a month. I really love it here in Silicon Valley. Personally I like Israel more because I was born there and that's where all of my friends and family are, but Silicon Valley is also a great place.

Hancock: Well thank you for sharing that insight. I'd like to now turn to this last section about looking ahead. And start by looking at the changes in technologies with the rise of the internet, cloud, and mobile. Certainly there's been change in the role and technology for firewalls, with the internet of things and other developments. Can you share what you see as top priorities for the next areas of focus for innovation in terms of technology in addressing security risks?

Shwed: So definitely the challenges of security is not becoming easier these days. We see that security is becoming both run by professional hacking teams and by strategic countries, and organizations that are using lots of resources. And very advanced methods of attacking other organizations. So security is clearly becoming more and more important as opposed to a side issue that's already solved. In terms of innovation and what we need to do: so first we need to learn how to better filter the information. Not just to say this is an attack or not an attack. But knowing that the information we're getting to--and the information that gets to us--the risk may be in the information. So that's definitely a challenge that we have.

I think the whole mobile space is becoming a huge challenge today. If you look at the enterprise space, we protect our networks, we know who's coming in and out. We need to improve the technologies; we need to use much better technologies to screen the data and the documents and the executables and everything that passes through the network. But we have control over the network. Mobility creates a complete shift in that. We still need to keep the network secure. But on the other hand, we work with these mobile phones. Suddenly they hear everything we say and things said around us. They see everything we see. And most of our business data also goes through them. They can listen to the network. And be broadcasting all the time. They're always connected--and not necessarily through the company's firewall, but through the mobile operators network and connected to the entire world.

So I think the key ingredient in protecting the future will be to handle data security of mobile phones so they don't become the back door for all of the hacking activity. We see it even internally. We just recently came up with a mobile threat prevention product--one of the only products. There are very few products in this industry that actually can detect malware on your mobile phone.

And we tell our employees just install it. And somebody says why, I don't have business data. It's my personal phone. Why do I need to install it? We have to explain to them that device is with you all of the time. So if you don't care about protecting your own privacy, maybe you should. But not even your own privacy--with that device, at work all of your work conversations can be recorded.

And we had an amazing demo. You don't realize this problem until you see the demo, that you take that device with a simple app that looks completely innocent. Two minutes later I show you that our entire conversation is recorded on the internet. Everything is exposed. So that's really scary for both businesses and individuals.

We are learning and we invested a lot in protecting the personal computers. How to protect servers, and so on. Now we get to this internet of things. These devices cannot run endpoint software on them. They are very simple. They cannot run additional software. They are devices that are built for one purpose. So we need to find a way to protect them as well. And maybe learn their communication patterns, and maybe identify when they are used in the wrong way. So that's another area.

Critical infrastructure in countries and everywhere is also very important. Factories, those are becoming important. Our power grids, our water systems, our traffic systems. We did a demo a few months ago for one of the largest car manufactures here in the US. We showed how we can take a five-year-old car and take over the car through the network, which is scary too. All of these systems have to be protected. And most of these systems, by the way, are not protected because they run very simple software, which is vulnerable. And they don't, it's not like we use a personal computer and download the security suite.

So we need to learn how to defend in all of these vectors. On one hand, more sophisticated attacks. And on the other hand, more and more places that we have to be.

And last, but not least, is the cloud. If it's infrastructure clouds, then we trust infrastructure. Then we can relatively easily protect that because we can run similar security measures that we run on physical servers on the infrastructure servers. But we trust our great vendors around the world, and we put all of our files on their servers, on their applications. By definition, it's on their application, and they control it.

We trust them, and they're doing a reasonably good job keeping our data. But our data, at the end of the day, is exposed. We need to worry about that now. There are certain things that can be done.

I think we're doing at Check Point, a lot of things to defend all of these environments. But there is a very long vision and roadmap that we have, in which we elevate the level of security that we get at each stage.

Hancock: You say cyber security is more important than ever. The demands are there. Congratulations, by the way, on the most recent stock performance for Check Point. There's validation from the market, from investors, from companies that have experienced cyber threats--JP Morgan, the US Government Personnel Office. So there's a greater need than ever. Validations from many, many sides. And at the same time, when things are like this, often there is some kind of unforeseen disruptor, whether from the threats or from new innovators. Are there some things that you have a hint of disruptors on the horizon? What they might be like.

Shwed: I wish I knew.

Hancock: No crystal ball.

Shwed: No crystal ball. I always said I don't know how to read the future. I know where things are heading. I know that we need more things. But I can't read the future. A lot of things can surprise us next month, next quarter, next year, and in five years. I think we know some of the direction. I think we know we will see some strategic attacks on our critical infrastructure in countries. I think that we know that mobile devices, that's a great example. I know we will see major attacks on them we haven't seen big attacks on them. We've seen small ones. We've seen small malware. It's enough to demonstrate that it's doable. And it's enough to show that the risk is there. So these are things that are very, very tangible. I think we need to preempt that. That's, I think, one of the issues with security.

On one hand we never like to think about the risks. Personally, I hate to think about the risks. I'm thinking very positively: I'm thinking about how to build this strong system that will defend us. I don't think about how this hacker works and how that hacker works. And I think that's one of the strengths of Check Point--that we are not dependent on understanding single individual vectors of attack. We're trying to build more generic architectures that can defend against known and unknown attacks. But we know about certain things that will happen, and we need to defend against them. I think the whole concept, the whole marketplace of security is built on very, very complicated and very technical issues that nobody wants to deal with at the end of the day.

Our job is to take all of this complexity and try to simplify it. So every administrator that works with our product can understand what they're doing and hopefully make it transparent to the end users. So when you and I use our computer, we're not, all the time, this is what we need to do to get along with the security. So for the most part it needs to be transparent to the end user the system. So that's our work, and I hope that we'll keep doing it.

Hancock: Well it's been an important and amazing journey for you and for Check Point. Just as we close, I'd like to ask a question at another higher level and one on more of an individual level. The one on the higher level: there's just been a dramatic rise in technological power, economic power in many different regions of the world. And this gives rise in capacity--in their ability to contribute. But also, perhaps, competitive threats. What regions, as you look across the globe, do you see as exciting opportunities and potential greatest challenges for your business in the next three to five years?

Shwed: I think exciting opportunities are everywhere. The entire world. The internet, one of the things it does is unify the world, and creates one thing. For somebody looking at the world today, it's very hard to imagine and compare how we were 25 years ago. Or 20 years ago. Everything became much more global, everything became connected. That's not the situation that we lived 20 years ago. Not that we

lived a bad life, we lived a very good life. But much more isolated. Not everything was global, not every product, not every piece of information, was something that you could reach from every part of the world.

I think in terms of exciting markets, there are a lot of exciting markets. I think some areas. There are a lot of areas in the world that haven't developed enough yet. There are a lot of areas in the world that haven't opened up enough yet.

And wherever we see threats coming from these directions, still if I look at most of the innovative technology in the world, it still comes from the very developed market. Silicon Valley is still very important. The US is important. There are some countries in Europe that create innovation. There are very few innovative companies from other countries. But somehow each culture develops its own expertise. We know that manufacturing is done in Asia. Certain types of cameras are built in Japan. Developing innovative products is still done a lot in Silicon Valley, a lot in Israel, a few other places too. For some reason we don't see a lot of that coming from other countries.

I think part of it is culturally. And part of it may be dependent just in what I think are the benefits of Israel. If you have a good local market, you're most likely to develop to that local market. I'm sure that in the Chinese market, there are great products. I know, and they cater to the Chinese market. Why? Because if you're a developing product, and if you have a billion people to sell to, why go far away? Why go to the other side of the world? And if you're in the US, and you have a pretty large, sizable market, you sell to that market. And it's great because the entire world imitates that and comes to the US, takes that technology, and it becomes a global leader. In Tel Aviv, it's the opposite. We don't have local markets, so we must develop to the global market and that leads us to think outside of our easy-to-reach market.

Hancock: Well, thank you. It's been such a pleasure to talk to you as a technology innovator, as an entrepreneur for building and growing Check Point's really scalable growth, and as a successful executive. I'd just like to ask, do you have any advice that you would give to an innovator--a young entrepreneur, aspiring somebody who is in their 20s like you were over 20 years ago. What advice would you share with somebody who's just starting out?

Shwed: I think there's a lot of different advice. I think first it's always good to go to good established companies to learn how to run the right business processes. The two years before I started Check Point when I joined there it was a company that's now called Orbotech in Israel. Back then it was Optrotech. I've learned so much from being in a larger company. So that was a great experience for me. Now with Check Point I still developed everything from scratch. But the experience that I got from every place that I was in my life, even for one or two months. Definitely a year was a huge experience. Looking around all the time and trying to absorb this much information. Not just about what you're doing, but about how the world works. How you interact with customers, how the system, how to run the business, and so on. It will help you when you grow and when you need that information eventually.

And the second is starting a start up can be a lot of fun. But it's also something you have to dedicate your entire life to. It's hard to describe it. But in this first three years of Check Point I really gave up everything that I had in life. And I really worked literally 18 hours a day with one single focus. That's not something that you can easily do, especially when you run your own start up. It's not just the physical hours and so on. There is an emotional price that is very, very high, when you have all the pressure on you. You must be successful. You must lead people. You must lead the investors. You must solve the problems of the customer. And it's just you. And you have no guarantee that it will succeed. When you're growing up, you have some track record. There's nothing guaranteeing that it will happen again next year. But at least you know that you have a track record. And you've solved some problems. So it will continue. It's already an ongoing process.

I think it's worth doing, but only if you have an idea that you truly believe can revolutionize the world. Now revolutionizing the world doesn't have to be, it can be pretty small. When I started Check Point I thought it would revolutionize the world. I thought it would be the best in the world. And I hoped that it would be a

company with 30 people and $3 million in sales. That looked great to me. I provide the best technology, I communicate with the entire world and work with 30 people that I love. So it doesn't have to be, it's not the size. But you have to think that the idea is worth it. And not just jump with different ideas. It's obviously very individual. And different people believe in different things. But that's the main thing to think about. And in order to do that, an idea must be a real quantum leap in what it does. Improving a process by 10% usually doesn't cut it. Doing something 10 times better has a chance. And that's kind of what people have to think about their ideas.

Hancock: Thank you so much. What a pleasure to interview you. Thank you again, on behalf of the Computer History Museum.

Shwed: Thank you very much.

END OF INTERVIEW

